

What is claimed is:

1 1. A computerized method for authenticating an electronic transaction between a
2 user and a computer, the computer being configured to conduct electronic transactions, the
3 method comprising:

4 receiving a computer-generated transaction identifier from the computer via an
5 electronic data link;

6 receiving a user-spoken transaction identifier and a user-spoken verification
7 identifier transmitted by the user via a voice connection;

8 comparing the user-spoken transaction identifier with the computer transaction
9 identifier;

10 comparing the user-spoken verification identifier with a voice print of the user; and

11 transmitting an authentication message to the computer if the user-spoken transaction
12 identifier matches the computer-generated transaction identifier and if the user-spoken
13 verification identifier matches the voice print.

1 2. The method of claim 1, wherein the computer transaction identifier is generated
2 by the computer in response to the electronic transaction conducted between the user and the
3 computer.

1 3. The method of claim 1, further comprising the step of providing the user voice
2 print and user payment information prior to the electronic transaction.

1 4. The method of claim 3, wherein the user voice print is provided by the user by
2 providing a spoken telephone number to a voice recognition unit.

1 5. The method of claim 3, wherein the user voice print is provided by the user by
2 providing a spoken user name to a voice recognition unit.

1 6. The method of claim 3, wherein the user payment information includes a credit
2 card number and an associated credit card expiration date.

1 7. The method of claim 1, wherein the step of receiving a user-spoken transaction
2 identifier and the step of receiving a user-spoken verification identifier must be performed
3 within a predetermined time from completing the electronic transaction.

1 8. The method of claim 7, wherein the predetermined time is about five minutes.

1 9. The method of claim 1, wherein the electronic data link includes the Internet.

1 10. The method of claim 1, wherein the electronic data link includes a private
2 network.

1 11. The method of claim 1, wherein the computer is a system component of a
2 financial institution.

1 12. The method of claim 11, wherein the financial institution is a bank.

1 13. The method of claim 12, wherein the user conducts the electronic transaction
2 using an ATM machine.

1 14. The method of claim 12, wherein the user conducts the electronic transaction by
2 communicating with a bank teller.

1 15. The method of claim 1, wherein the user conducts the electronic transaction
2 using a personal computer.

1 16. The method of claim 1, wherein the user conducts the electronic transaction
2 using a wireless device.

1 17. The method of claim 1, wherein the user conducts the electronic transaction
2 using a hand-held device.

1 18. The method of claim 1, wherein the computer is a system component of an
2 Internet web-site.

1 19. The method of claim 18, further comprising:
2 receiving at least one user-spoken command for controlling web-site navigation, the
3 at least one user-spoken command being transmitted by the user via a telephonic voice

4 connection;
5 converting the at least one user-spoken command into at least one computer-readable
6 command;
7 transmitting the at least one computer readable command to the computer; and
8 executing the at least one computer readable command, using the computer, whereby
9 the user controls web-site navigation of the Internet web-site by voice command via the
10 telephonic voice connection.

1 20. The method of claim 19, wherein the user is prompted by a voice menu system
2 to respond to voice menu options when transmitting the at least one user-spoken command.

1 21. The method of claim 1, further comprising:
2 providing at least one voice menu option to the user;
3 processing at least one user-spoken response to the at least one voice menu option, whereby
4 the at least one user-spoken response is transformed into at least one computer-readable
5 response;
6 transmitting the at least one computer-readable response to the computer; and
7 executing the at least one computer response, using the computer, whereby the user
8 controls the computer by voice command.

1 22. The method of claim 1, wherein the user-spoken transaction identifier and the
2 user-spoken verification identifier are transmitted by a telephonic voice connection.

1 23. The method of claim 1, wherein the electronic transaction includes an on-line
2 purchase of goods or services.

1 24. The method of claim 1, wherein the electronic transaction includes a banking
2 transaction.

1 25. The method of claim 1, wherein the electronic transaction includes downloading
2 music files.

1 26. The method of claim 1, wherein the electronic transaction includes a
2 point-of-sale transaction.

1 / 27. A system for authenticating an electronic transaction between a first
2 user-operated device and a computer, the computer being configured to conduct electronic
3 transactions, the system comprising:

4 a voice browser configured to receive and process user-spoken information when
5 coupled to a second user-operated device, the voice browser being programmed to compare
6 a user-spoken transaction identifier to a computer-generated transaction identifier, and to
7 compare a user-spoken verification identifier to a voice print of the user; and

8 a session correlator coupled to the voice browser, the session correlator being
9 configured to transmit an authentication message to the computer if the user-spoken
10 transaction identifier matches the computer transaction identifier, and if the user-spoken
11 verification identifier matches the voice print.

1 28. The system of claim 27, wherein the voice browser further comprises:
2 a voice recognition unit coupled to the second user-operated device via a network,
3 the voice recognition unit being configured to recognize audible tones transmitted over the
4 network; and
5 a database coupled to the voice recognition unit, the database being configured to
6 store the voice print of the user and payment information associated with the voice print.

1 29. The system of claim 28, wherein the voice recognition unit recognizes both
2 spoken input and DTMF input.

1 30. The system of claim 28, further comprising a telephony interface unit coupled to
2 the voice recognition unit, the telephony interface unit being configured to convert signals
3 carried by the network into signals having a correct format and amplitude.

1 31. The system of claim 27, wherein the voice browser further comprises a voice
2 menu system, the voice menu system comprising:
3 a voice menu option library having stored therein at least one voice menu option;
4 a user interface transmitter configured to transmit the at least one voice menu option
5 to the user, the user interface transmitter including a synthesized speech unit for generating
6 the at least one voice menu option, and a digitized audio unit for generating user-audible
7 signaling tones; and
8 a user interface receiver configured to recognize a plurality of user-spoken menu

9 selections provided by the user in response to the at least one voice menu option.

1 32. The system of claim 27, wherein the voice browser includes a digital signal
2 processor.

1 33. The system of claim 27, wherein the voice browser includes at least one software
2 module resident in an Internet backbone.

1 34. The system of claim 27, wherein the voice browser includes at least one software
2 module resident in a telecommunications switch.

1 35. The system of claim 27, wherein the voice browser includes at least one software
2 module resident in a computer disposed in a network data center.

1 36. The system of claim 27, wherein the voice browser includes at least one software
2 module resident in a computer disposed in a customer premise equipment.

1 37. The system of claim 27, wherein the voice browser includes at least one software
2 module resident in a computer disposed in an intranet.

1 38. The system of claim 27, wherein the session correlator includes at least one
2 software module resident in an Internet backbone.

1 39. The system of claim 27, wherein the session correlator includes at least one
2 software module resident in a telecommunications switch.

1 40. The system of claim 27, wherein the session correlator includes at least one
2 software module resident in a computer disposed in a network data center.

1 41. The system of claim 27, wherein the session correlator includes at least one
2 software module resident in a computer disposed in a customer premise equipment.

1 42. The system of claim 27, wherein the session correlator includes at least one
2 software module resident in a computer disposed in an intranet.

1 43. The system of claim 27, wherein the second user-operated device includes a
2 microphone.

1 44. The system of claim 27, wherein the second user-operated device includes a
2 telephone set.

1 45. The system of claim 44, wherein the telephone set is a wireless telephone.

1 46. The system of claim 45, wherein the wireless telephone is configured to use a
2 wireless access protocol.

1 47. The system of claim 27, wherein the computer transaction identifier is generated
2 by the computer in response to the electronic transaction conducted between the user and the
3 computer.

1 48. The system of claim 27, wherein the electronic data link includes the Internet.

1 49. The system of claim 27, wherein the electronic data link includes a private
2 network.

1 50. The system of claim 27, wherein the computer is a system component of a
2 financial institution.

1 51. The system of claim 50, wherein the financial institution is a bank.

1 52. The system of claim 51, wherein the first user-operated device includes an ATM
2 machine.

1 53. The system of claim 51, wherein the user conducts the electronic transaction by
2 communicating with a bank teller.

1 54. The system of claim 27, wherein the first user-operated device includes a
2 personal computer.

1 55. The system of claim 27, wherein the first user-operated device includes a
2 wireless device.

3
4 56. The system of claim 27, wherein the first user-operated device includes a
5 hand-held device.

1 57. The system of claim 27, wherein the computer is a system component of an
2 Internet web-site.

1 58. The system of claim 27, further comprising:
2 a user authentication input unit coupled to the first user-operated device and the
3 session correlator, the user authentication unit being configured to accept a user name and a
4 user password from the user;

5 a database coupled to the user authentication input unit, the database being
6 configured to store an authentic user name and an authentic user password; and

7 a user authenticator coupled to the user authentication input unit, the database, and
8 the session correlator, the user authenticator being programmed to compare the user name to
9 the authentic user name, and to compare the user password to the authentic user password,
10 whereby the user authenticator provides the session correlator with a transaction denial
11 message if the user name does not match the authentic user name, or the user password does
12 not match the authentic user password.

1 59. The system of claim 27, wherein the electronic transaction includes an on-line
2 purchase of goods or services.

1 60. The system of claim 27, wherein the electronic transaction includes a banking
2 transaction.

1 61. The system of claim 27, wherein the electronic transaction includes downloading
2 music files.

1 62. The system of claim 27, wherein the electronic transaction includes a
2 point-of-sale transaction.

1 / 63. A computerized voice verification method for authenticating an electronic
2 transaction between a user and a computer, the computer being configured to conduct
3 electronic transactions, the method comprising:

4 enrolling the user in a voice verification system, whereby the user provides the
5 system with a user voice print;

6 performing the electronic transaction;

7 receiving a transaction identifier from the computer via an electronic data link in
8 response to performing the electronic transaction;

9 receiving a user-spoken transaction identifier and a user-spoken verification
10 identifier transmitted by the user via a voice connection;

11 comparing the user-spoken transaction identifier with the computer transaction

12 identifier and the user-spoken verification identifier with a voice print of the user; and
13 transmitting an authentication message to the computer if the user-spoken transaction
14 identifier matches the computer transaction identifier, and if the user-spoken verification
15 identifier matches the voice print.

1 64. The method of claim 63, wherein a transaction denied message is transmitted to
2 the computer if the user-spoken transaction identifier does not match the computer
3 transaction identifier, or if the user-spoken verification identifier does not match the voice
4 print.

1 65. A computerized method for controlling web-site navigation, the method
2 comprising:
3 providing an authentication system including a voice recognition unit and a session
4 correlator, the voice recognition unit having access to a pre-registered voice print of the user,
5 whereby the authentication system is coupled to a user computer and a web-site during the
6 computerized method;

7 conducting a transaction between the user computer and the web-site, the web-site
8 transmitting a transaction identifier to the user computer and the authentication system in
9 response to the transaction;

10 receiving a user-spoken transaction identifier and a user-spoken verification
11 identifier via a telephonic connection, the authentication system being programmed to
12 compare the user-spoken transaction identifier to the transaction identifier and the
13 user-spoken verification identifier to the pre-registered voice print;

14 transmitting an authentication message to the web-site if the user-spoken transaction
15 identifier matches the transaction identifier and if the user-spoken verification identifier

16 matches the voice print;
17 receiving at least one user-spoken command for controlling web-site navigation, the
18 authentication system being programmed to convert the at least one user-spoken command
19 into at least one computer-readable command; and
20 transmitting the at least one computer readable command to the web-site, the at least
21 one computer readable command being executed by the web-site, whereby the user controls
22 web-site navigation of the web-site by the at least one user-spoken command.

1 66. The method of claim 65, wherein the at least one user-spoken command includes
2 a plurality of user-spoken commands.

1 67. The method of claim 65, wherein the plurality of user-spoken commands are
2 transmitted by the user in response to a plurality of voice menu options provided by the
3 authentication unit.

1 68. The method of claim 65, wherein a web-navigation is denied message is
2 transmitted to the computer if the user-spoken transaction identifier does not match the
3 computer transaction identifier; or if the user-spoken verification identifier does not match
4 the voice print.